

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

Claims 1-19. (Canceled)

20. (Currently Amended) A method of generating a transport stream, the method comprising:

~~reproducing-reading~~ an MPEG transport stream ~~composed of~~recorded in a recording medium, the MPEG transport stream including a series of transport packets ~~carrying data from a recording medium for transferring the MPEG transport stream through a digital interface;~~

generating program managing information for indicating a discontinuity of the MPEG transport stream in a form of a transport packet;

inserting the generated program managing information ~~for managing presentation of the data carried in the reproduced~~at a connection point in the read MPEG transport stream when a discontinuity occurs in the MPEG transport stream; and

transferring the MPEG transport stream including the inserted program managing information through ~~the~~a digital interface;

~~wherein the inserting step includes:~~

~~generating the program managing information in the form of a transport packet; and~~

~~inserting the generated transport packet into the reproduced MPEG transport stream.~~

21-23. (Canceled).

24. (Currently Amended) The method of claim 20, wherein the generated transport packet is inserted between two of the transport packets existing in the ~~reproduced~~ read MPEG transport stream.

25. (Currently Amended) The method of claim 20, wherein ~~in the reproducing step,~~ the recording medium is an optical disc.

26. (Currently Amended) The method of claim 20, wherein ~~in the reproducing step,~~ the MPEG transport stream is an MPEG-2 transport stream.

27. (Previously Presented) The method of claim 20, wherein the inserting step is performed within an optical disc player.

28. (Currently Amended) The method of claim 27, wherein the ~~reproducing~~ reading step is performed by the optical disc player.

29. (Canceled).

30. (Currently Amended) A method of generating a transport stream, the method comprising:

recording an MPEG transport stream ~~composed of~~including a series of transport packets carrying data on a recording medium, said ~~MPGE~~MPEG transport stream to be transmitted through a digital interface;

~~reproducing, from the recording medium,~~reading the recorded MPEG transport stream from the recording medium;

generating program managing information for indicating a discontinuity of the MPEG transport stream in a form of a transport packet;

inserting the generated program managing information ~~for managing presentation of the data carried in the reproduced~~ at a connection point of the read MPEG transport stream when a discontinuity occurs in the MPEG transport stream; and

transmitting the MPEG transport stream having the program managing information inserted therein through the digital interface;

~~wherein the inserting step includes:~~

~~generating the program managing information in the form of a transport packet; and  
inserting the generated transport packet into the reproduced MPEG transport stream.~~

31-32. (Canceled).

33. (Currently Amended) The method of claim 30, wherein the generated transport packet is inserted between two of the transport packets existing in the ~~reproduced~~read MPEG transport stream.

34. (Previously Presented) The method of claim 30, wherein ~~in the reproducing step,~~ the recording medium is an optical disc.

35. (Currently Amended) The method of claim 30, wherein the inserting step is performed within an optical disc player.

36. (Currently Amended) The method of claim 35, wherein the ~~reproducing steps~~reading step is performed by the optical disc player.

37. (Canceled).

38. (Currently Amended) An apparatus for generating a transport stream, the apparatus comprising:

a reproducing part ~~to reproduce~~configured to read an MPEG transport stream ~~composed of~~recorded in a recording medium, the MPEG transport stream including a series of transport packets carrying data ~~from a recording medium for transferring the MPEG transport stream and to be transferred~~ through a digital interface, and to insert program managing ~~information for managing presentation of the data carried in the reproduced~~for indicating a discontinuity of the MPEG transport stream at a connection point of the read MPEG transport stream when a discontinuity occurs in the MPEG transport stream; and

a transmitting part configured to transmit the MPEG transport stream having the program managing information inserted therein through the digital interface,

wherein the reproducing part generates the program managing information in the form of a transport packet, and inserts the generated transport packet into the ~~reproduced-read~~ MPEG transport stream.

39-41. (Canceled).

42. (Currently Amended) The apparatus of claim 38, wherein the reproducing part inserts the generated transport packet between two of the transport packets existing in the ~~reproduced~~ read MPEG transport stream.

43. (Previously Presented) The apparatus of claim 38, wherein the recording medium is an optical disc.

44. (Previously Presented) The apparatus of claim 38, wherein the MPEG transport stream is an MPEG-2 transport stream.

45. (Previously Presented) The apparatus of claim 38, wherein the apparatus is an optical disc player.

46. (Canceled).

47. (Currently Amended) An apparatus for generating a transport stream, the apparatus

comprising:

a recording/reproducing part configured to record an MPEG transport stream ~~composed of~~including a series of transport packets carrying data on a recording medium, said MPEG transport stream to be transmitted through a digital interface; to read ~~reproduce, from the recording medium,~~ the recorded MPEG transport stream from the recording medium; and to insert program managing information ~~for managing presentation of the data carried in the reproduced~~indicating a discontinuity of the MPEG transport stream at a connection point of the MPEG transport stream when a discontinuity occurs in the MPEG transport stream; and

a transmitting part configured to transmit the MPEG transport stream having the program managing information inserted therein through the digital interface,

wherein the recording/reproducing part generates the program managing information in the form of a transport packet, and inserts the generated transport packet into the ~~reproduced~~read MPEG transport stream.

48-49. (Canceled).

50. (Currently Amended) The apparatus of claim 47, wherein the generated transport packet is inserted between two of the transport packets existing in the ~~reproduced~~read MPEG transport stream.

51. (Previously Presented) The apparatus of claim 47, wherein the recording medium is an optical disc.

52. (Canceled).

53. (Currently Amended) An apparatus for generating a transport stream, the apparatus comprising:

means for ~~reproducing~~ reading an MPEG transport stream ~~composed of~~ recorded in a recording medium, the MPEG transport stream including a series of transport packets carrying data from a recording medium for transferring, the MPEG transport stream to be transferred through a digital interface;

means for generating program managing information indicating a discontinuity of the MPEG transport stream in a form of a transport packet;

means for inserting the generated program managing information ~~for managing presentation of the data carried in the reproduced~~ at a connection point of the read MPEG transport stream when a discontinuity occurs in the MPEG transport stream; and

means for transmitting the MPEG transport stream including the inserted program managing information through the digital interface;

~~wherein the inserting means generates the program managing information in the form of a transport packet, and inserts the generated transport packet into the reproduced MPEG transport stream.~~

54. (Currently Amended) An apparatus for generating a transport stream, the apparatus comprising:

means for recording an MPEG transport stream ~~composed of~~ including a series of transport packets carrying data on a recording medium, said MPEG transport stream to be transmitted through a digital interface;

means for ~~reproducing, from the recording medium,~~ reading the recorded MPEG transport stream from the recording medium;

means for generating program managing information indicating a discontinuity of the MPEG transport stream in a form of a transport packet;

means for inserting, ~~into the reproduced MPEG transport stream,~~ the program managing information ~~for managing presentation of the data carried in the reproduced~~ at a connection point of the read MPEG transport stream when a discontinuity occurs in the MPEG transport stream; and

means for transmitting the MPEG transport stream having the program managing information inserted therein through the digital interface;

~~wherein the inserting means generates the program managing information in the form of a transport packet, and inserts the generated transport packet into the reproduced MPEG transport stream.~~

55. (Previously Presented) The method of claim 20, further comprising:

detecting a null time interval in the MPEG transport stream, said null time interval corresponding to said discontinuity,

wherein the inserting step inserts the program managing information into the detected null time interval.



56. (Previously Presented) The method of claim 30, further comprising:  
detecting a null time interval in the MPEG transport stream, said null time interval corresponding to said discontinuity,  
wherein the inserting step inserts the program managing information into the detected null time interval.

57. (Previously Presented) The apparatus of claim 38, further comprising:  
a detecting part configured to detect a null time interval in the MPEG transport stream, said null time interval corresponding to said discontinuity,  
wherein the reproducing part inserts the program managing information into the detected null time interval.

58. (Previously Presented) The apparatus of claim 47, further comprising:  
a detecting part configured to detect a null time interval in the MPEG transport stream, said null time interval corresponding to said discontinuity,  
wherein the recording/reproducing part inserts the program managing information into the detected null time interval.

59. (Previously Presented) The apparatus of claim 53, further comprising:  
means for detecting a null time interval in the MPEG transport stream, said null time interval corresponding to said discontinuity,

wherein the means for inserting inserts the program managing information into the detected null time interval.

60. (Previously Presented) The apparatus of claim 54, further comprising:

means for detecting a null time interval in the MPEG transport stream, said null time interval corresponding to said discontinuity,

wherein the means for inserting inserts the program managing information into the detected null time interval.